

## PROJECT-BASED LEARNING

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My school sponsors mini grants for teachers to research and develop projects that are of special interest to them. This past school year, I received one of these mini grants to explore project based education. This project was developed for two reasons. First, with the adoption of the new technical standards, the focus for career and technical education is to develop project-based learning experiences that allow students to successfully meet content standards while integrating academic standards and the SCANS skills.

Secondly, even though the focus of current education seems to be on developing competent test-takers, the bottom line for educators is still helping students establish connections to life outside the classroom, address real world concerns, and develop real world skills. Many of the skills learned through well-designed projects are those sought after by today's employer, including the ability to work well with others, make thoughtful decisions, take initiative, and solve complex problems.

With these two goals in mind, project-based learning can be a useful tool to deliver content-based curriculum and real-life work skills. Here is an overview of this method of teaching.

### WHAT IS PROJECT-BASED LEARNING?

Project-based learning (PBL) is a teaching method that emphasizes learning activities that are long-term, interdisciplinary, student-centered, and combined with real world issues and practices.

The main components of PBL are:

- \***Curricular content**-- projects are to be based on standards, to have clearly stated goals, and support and demonstrate content learning both in process and product.
- \***Student direction**--projects are to maximize student decision-making and initiative throughout the course of the project-from topic selection to design, production, and presentation decisions. Projects should include adequate structure and feedback to help students to make thoughtful decisions and revisions.
- \***Collaboration**--projects should foster cooperation among students, between students and the teacher, and even between students and other community members.
- \***Real world connection**--projects are to connect the curriculum to the real world by addressing real world issues that are relevant to students' lives or communities.
- \***Assessment**--projects should have varied and frequent assessment, including teacher assessment, peer assessment, self-assessment, and reflection.

The Challenge 2000 Multimedia Project. "Project-Based Learning with Multimedia".

[http://pblmm.k12.ca.us/topics\\_main.htm](http://pblmm.k12.ca.us/topics_main.htm)

Houghton Mifflin's Project Based Learning Space. "Background Knowledge and Theory".

<http://college.hmco.com/education/pbl/background.html#The%20Basics>

## HOW ARE PROJECTS DEVELOPED?

There are many formats of project development. Here are the first two steps in developing projects:

### 1. Beginning the project.

Discuss the topic with the students to find out what experiences they've had, and what they already know. From the discussion, compile questions students may have, or formulate questions that you can see would fill gaps in students' knowledge. Look at the way you currently teach this topic. What doesn't "work" for you and the students?

What do you wish students would gain from this topic?

### 2. Developing the project.

Choose technical, academic and SCANS skills to be met by the project.

Look for resources that can help answer the questions raised in step one. Decide on what you want to assess and how you want to assess it. Develop activities that are real-life experience based and could help students gain knowledge and skills. Design a project that will have a product.

When developing projects, the following list of criteria can be used to determine if the project has depth, scope, and meaning.

- ☐ Allows for a variety of learning styles
- ☐ "Real" world based--learning has value for the student in the context of their own life
- ☐ Encourages higher order thinking skills and learning concepts as well as facts
- ☐ Uses hands-on approaches
- ☐ Allows for a variety of learning styles
- ☐ Learning process is valued as well as the learning project
- ☐ Learning is cross-curriculum
- ☐ A variety of assessment tools is used
- ☐ Self-directed learning is encouraged
- ☐ Promotes a variety of communication skills
- ☐ Help students understand and use technology
- ☐ Encourage interacting with others and sharing ideas

South Dakota Crosswalk Project. Division of Workforce and Career Preparation. Pierre, SD

## **PROJECT FORMATS**

There are several models for projects. Here is one from the South Dakota Division of Workforce and Career Preparation.

### **PROJECT MODEL**

#### **Project Title:**

#### **Project Description:**

This is a brief description of the project, an overview of the learning activities and products that will result in the activities.

#### **Course Goals:**

This section lists the technical, academic, and SCANS skills you expect the student to achieve through completion of the project.

#### **Instructional Activities:**

This is a list of the activities the student will do to achieve the goals you have set.

#### **Instructional Delivery Plan:**

This is an outline of how you as the teacher will present the project to the class. It will also state any direct teaching you will do and resources the student will use.

Some tips for delivery of projects:

*Write clear, easy to understand steps for accomplishing the standards and goals you set.*

*Be enthusiastic about this method of instruction.*

*Emphasize the knowledge and skills students will gain from the project.*

*Have resources easily accessible.*

#### **Assessment:**

In this part of the model, the methods of assessment will be shown. Again, the assessment is directly related to the course goals.

Some tips for assessment:

*Assess the skills you wanted the student to gain from this project.*

*Include the technical, academic and SCANS skills.*

*Design assessments to evaluate the process and product.*

*Encourage self-assessment by the student.*

*Rubrics can be good assessment for projects.*

## **WEBQUEST MODEL**

Another type of project that has become popular is a WebQuest. This is another form of project based learning that used the internet as an integral part of the project.

### **What are WebQuests?**

WebQuests are a project based format that takes “essential questions” about a particular topic and guides the student to research, analyze and synthesize information that will answer these questions. The questions are real life situations or problems, and the answers are real life ways to deal with these situations or problems.

### **Why WebQuests?**

The buzz words in education now are critical thinking, cooperative learning, authentic assessment, and technology integration. A WebQuest can bring together effective instructional practices, sound content, and important life skills into one integrated student activity.

### **What are some integral parts of WebQuests?**

#### **--Teamwork**

When students take on roles within a cooperative group to solve the problem presented in the WebQuest, they must develop expertise on a particular aspect or perspective of the topic, and they must demonstrate teamwork skills to bring about a solution or solutions to the essential question posed in the WebQuest

#### **--Communication**

The answer or solution the student teams develop can be posted, e-mailed or presented to real people for feedback and evaluation. This authentic assessment also motivates students to do their best and come up with a real group answer, not simply something to fulfill an assignment.

#### **--Thinking Skills**

One of the main features of any WebQuest is that students tackle questions that prompt higher level thinking. The question posed to students can not be answered simply by collecting and spitting back information. WebQuests break the question into meaningful "chunks" and ask students to undertake specific duties to solve the problem.

#### **--Process**

Research has shown that the most important factor related to student learning and technology use is how teachers relate the technology-based activity to other learning activities. Webquests linked to previous and subsequent activities provide students with a sense of continuity and an ability to see the “total” picture.

### **Choosing a WebQuest**

As a teacher, you know your students, their prior experiences and knowledge, the things that tend to interest them, and the goals you hope to achieve while studying a topic. Successful WebQuests will act as one more learning strategy to achieve these goals.

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<http://www.ozline.com/webquests/intro.html>

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## **WHAT MAKES UP A WEBQUEST?**

Like any good lesson, WebQuests have a number of distinct phases or parts:

- \* an introduction which grabs the learner's interest while previewing the lesson
  - a description of the task, the thing they will have accomplished or created at the end of the lesson
  - an explanation of the process: the step by step activities through which the task will be done. In this process are online resources to be read and used
- \* a description of how the learner's performance will be evaluated
- \* a conclusion which ties things together and suggests additional resources for further

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## **Where can you find out more about WebQuests?**

There are some excellent sites on the Web to help you get started and to give you some great samples of WebQuests. Here are just a few:

<http://www.edhelper.com/>

<http://edweb.sdsu.edu/WebQuest/matrix.html>

<http://www.spa3.k12.sc.us/WebQuests.html>

<http://school.discovery.com/schrockguide/WebQuest/WebQuest.html>

[http://edweb.sdsu.edu/WebQuest/WebQuest\\_collections.htm](http://edweb.sdsu.edu/WebQuest/WebQuest_collections.htm)

<http://www.kiko.com/wqst/showcase.jsp>

<http://www.ozline.com/learning/index.htm>

## **WebQuest Template**

Concept:

Topic:

Guiding Questions:

Technical Standards:

Academic Standards:

Transferable Work Skills:

Resources: